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-IN THIS ISSUE-

Agriculture is again proving that it is able to produce an adequate supply of food and fiber in the face of difficulties. This time the chief problem is one of farm labor. Mr. Hale is in charge of the Department of Agriculture's farm product price and labor reports.

Mr. Burkhead, in charge of crop and livestock reporting activities in Maryland and Delaware, tells us confidentially that the broiler chicken farms should be seen to be appreciated. So we will probably get over that way one of these days. Burkhead, incidentally, seems to have a flair for unusual articles. He will have a new one all cooked up for you next month.

If cheese is used to bait a mousetrap, it is probably a weapon for offense. But if it is shipped to Great Britain to help in the fight against aggression, it becomes a weapon for defense. Mr. Bormuth, Department of Agriculture statistician, thought you might be interested in a few not-so-well-known facts about this popular agricultural product.

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Notice to Librarians:

In the past, a volume of Marketing Activities has comprised 6 issues, the volume number being changed in January and July. Henceforth, a volume will consist of 12 issues, the volume number to be changed in January.

LABOR SUPPLY AND FARM PRODUCTION

By Roger F. Hale

The national defense program has made deep inroads in the available supply of farm labor during recent months. Thousands of farm workers have been sent -- via the Selective Service route or by enlistment -- to contonments all over the country. Other thousands have drifted into the cities to work in airplane factories, steel mills, and shipyards. This gigantic shift of workers is likely to continue at an increasing rate as the industrial machine gathers momentum.

According to the Bureau of Labor Statistics, 2,735,000 persons have been added to industrial payrolls, and this is aside from the upturn in the military and naval forces. Some of these people came from the farm, others from nonfarm rural areas, and still others from urban centers. Many of them were potential farm workers.

For many years the farm has provided a reservoir of workers from which other industries could draw. And during the past decade, the use of the automobile has enabled many persons to live on the farm while engaging in off-the-farm work. So close is the inter-relationship between the supply of farm workers and nonfarm industrial employment that a pick-up in other types of work is reflected immediately in a decline in the number of men available for agricultural employment.

More Workers Being Hired

In some instances, the current migration of workers from the farm to the factories has worked a real hardship. Yet no serious shortage of farm labor has developed. The wages of farm labor have risen sharply, true, but more workers are being hired now than at the same time in 1940 -- some of the increase probably representing a shift from an unpaid family worker status to a regular wage basis. And there has been little evidence to indicate a decline in agricultural production.

Grain crop prospects for 1941 indicate a harvest somewhat larger than a year ago. Cotton acreage is down 5 percent this year, but stocks of cotton lint in domestic warehouses are considerably heavier than last season. Milk production on June 1 was about 5 percent above the same date in 1940. And production of manufactured dairy products continues heavy. The number of eggs laid in May 1941 was only 1 percent smaller than in the same month last year. The output of commercially hatched chicks during May reached a new high record for the month. A 5 percent increase is indicated in this year's pig crop.

Declines have occurred in the output of a few commodities, several factors being responsible. The lateness of the season and unfavorable weather conditions materially reduced truck crop marketings in early June. Smaller hog marketings reflect an unfavorable price situation a year ago. And relatively high prices for milk this spring have discouraged the slaughter of calves.

The increase in milk production during the last few months does not confirm reports of widespread farm labor shortages in the Northeastern States--New York, Pennsylvania, New Jersey, and New England. To a large extent, this important dairy area includes many centers of industrial defense activitity. Steel plants, coal mines, aircraft factories, shipyards, chemical industries, and a large percentage of the textile manufacturing establishments are here and the density of population calls for a relatively large supply of fluid milk for human consumption.

In this area, naturally, the supply of farm labor has decreased the fastest during the past year. Reports of a reduction in the farm labor supply of a third or more compared with a year ago were not uncommon in April. It is estimated that 75,000 fewer persons were working on farms in the Northeast on June 1, 1941, than on the same date last year. But dairy farmers in this area still managed to increase milk production over a year earlier on June 1.

The same situation prevails in the Midwest, the South, and the Far West, but perhaps to a lesser extent. Men have left the farms to join the Army, or the ranks of nonagricultural workers. Farm wage rates have risen. The number of unpaid family workers employed on farms has declined but the number of hired workers on June 1 was up a little compared with a year ago. Prospective production of the principal crops has risen. This is a tribute to farmers' willingness to work longer hours and to their increased efficiency.

Efficiency Increases on the Farm

The latest available figures show that prior to the World War--World War I, that is--it took 109 man-hours of labor to produce 100 bushels of corn. By the mid-30's it took 90 man-hours. Over the same period the man-hours required to produce 100 bushels of wheat dropped from 89 to 41; oats, from 42 to 27; and potatoes, from 79 to 64.

These figures are a story of mechanization, of shifts in cultural practices, of improvement in crop varieties, and of controls for diseases and insect pests. The speed of these developments has also been determined in part by economic factors, such as the necessity for adjusting operations to maintain output with a smaller labor supply and by upturns in farm wage rates.

Already sharply higher, farm wage rates can be expected to advance still more as defense activities, both military and industrial, make further inroads in the supply of farm labor. This problem the American farmer will meet. If, through lack of income, he is unable to match the higher wages paid by industry, he will hold a large proportion of his hired workers by bettering housing conditions and by increasing the allowances of other perquisites. He will supplement his hired labor force with school, high school, and college students during the period of peak seasonal labor requirements.

He will probably have to work longer hours himself. He may even ask his wife and daughter to help with the milking or to operate the tractor. If the shift is needed and can be made sufficiently remunerative, he may be willing to reduce his wheat, corn, sugar, and cotton acreages and concentrate on the production of meat, fruits, and vegetables, and dairy and poultry products. The more than 6 million American farmers can be depended upon to do their part in the national defense effort.

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1941 PIG CROP UP FROM LAST YEAR

The decrease in hog production that started in 1940 has been quickly checked and more hogs will be raised in 1941 than in 1940. The estimated spring pig crop of 1941 is practically the same as that of 1940, but the number of sows to farrow in the fall season of 1941 is indicated at 13 percent larger than the 1940 number. The combined spring and fall crop this year will exceed that of last year by at least 5 percent but it will be smaller than the 1939 crop.

The number of pigs saved in the spring season of 1941 (December 1, 1940 to June 1, 1941) is estimated at 50,083,000, compared with 50,066,000, the revised estimate for 1940. The spring pig crop was larger this year in the East and West North Central States, but was down in all other regions. For the North Central Srates (the Corn Belt States) the number of this year's spring pigs was 38,906,000 compared with 38,207,000, the revised estimate for last year--an increase of 2 percent. The decreases in other regions were as follows: North Atlantic, 13; South Atlantic, 5; South Central, 5; and Western, 6.

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MID-MONTH WHEAT CROPS REPORTS SCHEDULED FOR SUMMER MONTHS

Special mid-month reports on probable production of wheat in the most important producing States will be issued during July and August and will relate to spring wheat production in South Dakota, North Dakota, Montana, and Minnesota. The reports may be expanded to cover other States, however, if the situation warrants. A special report covering the winter wheat crop in certain States was released June 23.

With a record carry-over of old wheat and a large new crop in prospect, certain areas may have difficulty in handling, storing, and transporting the grain. The Department of Agriculture is making every effort to insure the best use of storage capacity and transportation facilities, and has assisted in organizing local committees to handle the crop when harvest gets under way. It is believed that more frequent reports on production will be of assistance to these committees.

FARM PRODUCT PRICES UP 6 POINTS IN JUNE

Prices received by farmers for their products continued to advance during the month ended June 15. At 118 percent of the 1910-14 level, the index of all farm commodities combined was 6 points higher than in mid-May, and 23 points higher than on June 15, 1940. The rise in prices was rather general, the advance since mid-May ranging from 2 to 11 points for the principal commodity groups.

The upturn in prices during the month is primarily a reflection of the continued expansion of industrial activity, with larger consumer incomes increasing the demand for farm commodities. Higher loan rates on basic products and the food-for-defense buying program of the Government, however, also have been important factors in raising the price of commodities in local farm markets.

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EMERGENCY CASTOR BEAN SEED PROGRAM ANNOUNCED

The Department of Agriculture recently announced an emercency castor bean seed production program designed ultimately to furnish this country with a supply of adapted seed stocks in the event developments should make it expedient to increase domestic castor oil production in 1942.

The program will be limited to 11 counties in the black-land area north and south of Dallas, Texas. It will be carried out in cooperation with the Texas Power and Light Company, which has most of the available adapted seed stocks and technical information which it has acquired in its experiments with castor beans as a possible new crop in the agricultural territory it serves. The company is donating the seed and the services of some of its technical personnel.

Dehydrated castor oil is now used chiefly as a drying oil by the paint, varnish, and allied industries, and can be used as an acceptable substitute for some of the important purposes for which tung oil is now needed. This substitution is of great importance since the imports of tung oil have been sharply reduced by war in China.

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By grading their berries strictly according to Government standards, with the assistance of the Federal-State inspection service, Kentucky strawberry growers were able this season to meet competition from several other States and to receive a fairly good price, according to reports to the State College of Agriculture and Home Economics. Nine cooperatives and four private firms used the inspection service this year.

DELAWARE GOES IN FOR BROILERS

By C. E. Burkhead

Delaware's amazing broiler chicken industry has probably set some kind of record for rapidity of growth. Starting from scratch along in 1926, when a few venturesome poultrymen made a nice profit on broilers, this unique enterprise now numbers its annual output way up in the millions. With new facilities being added every week throughout the broiler area, Delaware is doing its best to live up to its nickname--the Blue Hen State.

The industry is centered in Sussex County in the southern part of the State, though the adjacent Maryland and Virginia area is dotted with chicken houses. Climate and soil are favorable for chicken raising and this may have something to do with the rapid growth of poultry production in this particular locality. However, relative nearness to markets and easy credit for financing operations are probably major factors encouraging expansion.

Scientific Methods Used

Poultrymen in the area have taken a scientific approach to the business of producing broilers. Only hatching eggs from disease-free flocks are used. The young chicks are fed on special rations--and they get their daily supply of vitamins. Cross-breeds are used because these bring the highest prices. When the broilers are ready for market they are taken to killing plants where they are made ready for the kitchen by assembly line methods. A broiler, according to the Delaware definition, is a chicken weighing about three pounds "on the hoof." If all goes well a producer may be able to raise three batches a year, sometimes more, if sold at an unusually early age.

Nobody knows just how many broilers are produced in the area. The U. S. Department of Agriculture and interested State agencies are working on the problem and hope to get a definite line on the volume of production before long. It is estimated, however, that 90 million hatching eggs are required annually to supply the young chicks, so the industry is no backyard proposition.

While the New England States supply a large percentage of the chicks required by Delaware producers, many local hatcheries have been built during the past few years and Delaware, Maryland, and Virginia poultry specialists are doing much to encourage the production of eggs for hatching. Eggs for producing broiler chicks usually command a premium over eggs for ordinary market consumption.

Many of the chicks purchased have been "sexed" by a process first introduced by the Japanese. This permits sorting accordig to sex. The males and females are placed in separate houses or at least in separate sections of the house. This prevents fighting among the flock which will

occur even when the chicks are only a few days old. Fighting usually results in higher death losses because the larger and healthier chicks, especially males, prevent the weaker birds from feeding properly. Pullets often command a premium on the market and go to special outlets, though this is not always the case.

Meat-type Chickens Produced

Early in the industry not so much attention was paid to breeds. Today perhaps 95 percent of the young chicks are "cross-breeds" developed by crossing Rhode Island or New Hampshire Red hens with Barred Rock cockerels. This produces a sturdy breed of the meat type. The pure strains of Rocks and Reds are also raised, and these two--with the crossed type--constitute the breeds of chickens produced as broilers.

As soon as the producer receives his young chicks he puts them in low, narrow "broiler houses"--some of which are a thousand feet long. The houses, mostly of wood construction, may have floors; but most of them set right on the bare ground with sawdust, sand, fine wood shavings or peat moss for floor litter. Partitions enclose a space large enough for raising about 500 young chicks, and a small pen is provided outside to give them room to roam. The houses are heated by stoves in cold weather, and are protected so that the chicks can't come in contact with the hot surfaces. The chicks must be watched day and night and usually a caretaker is at hand.

Special kinds of feed are available for the chick during all stages of its growth, but usually only a fine starter feed, high in protein content, is used at first. Later on a mash is used. The young chicks must be fed all they will eat in order to put on as much poundage as possible in the shortest period of time. Like humans, they thrive better if they get their daily vitamins, and these substances are mixed with their food.

The young chicks are fed almost entirely on commercially prepared feeds until they are from 12 to 14 weeks old--some older--before they are marketed. Normally it takes about 12 pounds of feed to produce a 3-pound broiler, and, of course, the older the bird the more feed required to produce a pound gain in weight. That is one reason why it is usually not profitable to feed a bird beyond the age of 14 weeks. Incidentally, no other farm animal makes such rapid growth or is as efficient in feed utilization as the chicken. A young chick weighs about 1.25 ounces and increases its original weight almost 38 times to reach a weight of 3 pounds.

Large Feed Business Developed

The feed business on the Del-Mar-Va Peninsula--as the area is called--is gigantic. Many leading producers use thousands of dollars worth every month. Most of the feed, commercially prepared, is shipped in from other States, but some of it is now being furnished by local concerns. Some of the large feed companies maintain traveling represen-

tatives who help producers with their feeding problems, and this service is usually free regardless of the brand used by the producer. With the keen competition that prevails, most broiler feed is highly efficient.

Quite a few feed dealers raise broilers themselves. Houses, if available, may be rented or even built, filled with chicks, and a caretaker hired to raise them. Others may furnish feed on credit and retain title to the chickens until they are sold.

No matter who raises the broilers, disease must be guarded against. Regardless of precautions, hundreds of chickens, young and old, may die overnight. According to poultry specialists, internal parasites and diseases of the respiratory system are the most common ailments. Pullorum is a deadly infectious disease, and resembles, in many ways, bacillary white diarrhea. Pullorum takes its toll during the first 3 weeks of chick life. This disease, however, is now being overcome chiefly by the eradication of infected flocks, which, in turn, could transmit the disease through the egg to the young chick.

If the producer successfully hurdles all difficulties, he usually markets his chickens on the "country buyer system." Buyers or their representatives travel through the producing section and purchase live broilers at a given price at the farm. These buyers furnish their own trucks and load at their own expense, so the producer can focus his efforts on raising a broiler to selling size as quickly as possible.

Of course, a large number of broilers are consumed locally. Delaware has a number of summer resorts, and a considerable number of chickens are sold to tourists who cross the State. Many producers display roadside signs advertising broilers alive, fresh killed, or dressed. Thousands of chickens are sold annually through this particular outlet, and this method of sale is increasing every year.

Prices Fluctuate

Prices of broilers have fluctuated considerably since the industry was established. In 1930 broilers brought as much as 45 cents a pound on the foot and in 1933 as little as 14 cents. Today they are selling for about 17 cents a pound, and, with reduced production costs, that price is conducive to expansion of the industry. To one traveling in Delaware regularly it is easy to see the expansion--the rapid expansion--that is taking place. From week to week new houses spring up and take their place beside other houses that are often only a few weeks older.

This expansion of production has been paralleled by the establishment of killing plants in the area. At present there are 4 plants in Delaware and 2 in Maryland, the combined potential operating capacity being about half a million or more birds weekly. Killing in these plants is on a mass production basis and some plants may dress as many as 25,000 chickens in a 24-hour period. Dressing means feathers off, head and feet on.

At the killing plant an attendant places the birds, head down, on shackels attached to a horizontal revolving chain. Another attendant, with a keen razor-sharp knife, severs the jugular vein and the dead bird moves on until it reaches a vat of hot water. This water is heated to about 128 degrees and the chickens are immersed for only about 30 seconds--just long enough to loosen the larger feathers. As the birds emerge from the hot water mechanical rubber fingers, and attendants, quickly remove most of the feathers. The birds then pass through a blast of warm air for quick drying and move on into a mixture of liquid wax. After standing for a little while attendants remove this coat of wax and with it comes the remaining feathers. During this entire process care is taken to retain the "bloom" of the bird--the fine outer skin covering and the natural color of the fowl.

Feathers Are A By-Product

At the killing plants tons of feathers accumulate and also a large volume of blood. At present very little use is made of the blood but most of the feathers are washed, dried, and used in pillows. It is also said that many tons of dried feathers are packed and shipped to Great Britain for various uses, one of which it is thought, is for sound insulation.

The dressed broilers are inspected and packed in boxes, crates, and barrels. Iced or chilled, they are shipped to New York, Philadelphia, Baltimore, Washington, and even as far west as Chicago and St. Louis, and as far south as Florida.

It must not be assumed that the Delaware area has a monopoly on broiler production. It doesn't. Arkansas, California, Illinois, Maryland, Ohio, Virginia, and other States are now producing broilers by the millions. It is estimated, unofficially, that close to 150 million broilers are produced in this country each year. If that estimate is correct, every person in the United States--young and old--can have a broiler at least one Sunday during the year.

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U.S. DAIRY SCIENTISTS DEVISE METHOD OF EVAPORATING MILK TO SAVE SHIPPING SPACE

A new method of making evaporated milk to enable processors to put 25 percent more milk solids in the standard can or case, and thus save valuable shipping space as well as considerable quantities of tin, was described recently by Dr. B.H. Webb and Dr. R.W. Bell of the Bureau of Dairy Industry, who devised the procedure. They found that if milk is forewarmed at temperatures considerably higher than the conventional 95° C., it may be concentrated to a milk solids content of 32 1/2 percent, without curdling in the heat of sterilization. The extent of concentration depends somewhat on the characteristics of the milk. Use of the new method would require only a tubular heater.

CHEESE--A NEW WEAPON FOR DEFENSE

By Dale Bormuth

Cheese, the legitimate prey of all confirmed ice box raiders, has at last come into its own. This old friend, which is equally at home on whole-wheat, rye, or white bread, has blossomed out almost overnight as one of our newest defense weapons. The transformation has taken place with almost unparalleled publicity, more having been written about cheese in the last few weeks than during any comparable period in history. But, when all the excess verbiage is stripped away, one simple fact stands out: Great Britain needs cheese and we have agreed to supply it.

Britain's high regard for cheese as a food comes as something of a surprise to you, perhaps, yet cheese has been a staple item in the larders of the British people for hundreds of years. Most nations, as a matter of fact, have recognized the high food value of this product and have developed varieties to suit their individual tastes.

The names used to describe the varieties run into the hundreds, and to be a real connoisseur you must have a good memory. Unless you are a cheese expert, furthermore, it is a safe bet that many of these names will have an unfamiliar ring. For example, did you ever see a package of Bgug-Panir on the shelves of the corner grocery store? Did you ever eat Chaschol de Chaschosis, or Eriwani, or Kajmak, or Queso de Cincho? Probably not.

If you are like millions of other consumers in the United States, your cheese-buying habits are limited to a few varieties. During the course of a year you will buy more American cheese than any other kind, probably because the flavor has become something of a habit with you. Once in a while you will buy Swiss and cream cheese, particularly if you are giving a party. Munster, brick, Limburger, and a few Italian varieties you can take or leave alone.

American the Leading Variety

American cheese has been king for a long time, though the name "American" is really a misnomer. The cheese originated in the village of Cheddar, in Somersetshire, England, and the name "Cheddar" is often used interchangeably with "American." The term "Cheddar" is also used to describe the process of manufacture.

Cheese made by the Cheddar process has many different shapes with distinguishing names, such as Flats, Daisies, Young Americas, Long Horns, and Squares. The cheese may be white or colored yellow, and it may be almost fresh or thoroughly ripened. It is made from sweet milk of cows and may be whole, partly skimmed, or fully skimmed milk. When made of unskimmed milk it is popularly called "full cream;" when otherwise, it is called "part skim" or simply "skim."

Swiss cheese is very popular, though the production is much smaller than the output of American, and a considerable quantity is normally imported--under the name of Emmenthaler--from Switzerland. Most of the domestic product is made up in large wheels weighing from 125 to 225 pounds; but a portion of it is made up into "block," which is smaller in size and can be made from one day's milk during periods of the year when milk receipts are at low levels. The large holes that are characteristic of this variety are not drilled by machinery, as you may have been told. They are formed by gas-producing bacteria placed in the product during the manufacturing process.

Genuine cream cheese is made from a rich cream thickened by souring or from sweet cream thickened with rennet. It is a mild rich cheese, which is at its best when eaten a few days after it is made. Philadelphia cream cheese, quite widely known, has pimientos, pickles, and other condiments added to make it tasty.

Brick cheese probably gets its name from its shape. Purely a domestic variety, brick cheese is something of a cross between Limburger and Swiss. Manufacture of brick cheese centers in Dodge County, Wisconsin, and in this county alone a good proportion of the entire country's supply is made.

Limburger Stands Out

Limburger gets its name from the city of Limbourg, in Belgium, though practically all of the variety consumed in this country is produced domestically. This type of cheese is made so cheaply and is of such good quality in this country that the foreign make has been crowded out of the market. Limburger is not an extremely popular variety, its odor making supreme demands on the self-control of the consumer. But some people after a long period of training learn to like its characteristic flavor--they say.

Italian cheese has constituted a greater portion of the cheese imports into this country than any other type. With the increasing demand for this type of cheese, domestic production has increased many fold in the last few years and will probably gain even more if the war continues to limit importations. Italian cheese is the hard type that was grated in powdery form over your spaghetti at the Cafe Italia the other night, and is identified by such names as Caciocavallo, Parmesano, or Gorgonzola.

Other varieties of cheese are manufactured in the United States, but the quantities are too small to have commercial importance. Edam, Gouda, Koch Kase, and Leyden are some of the Netherlands types produced. Swedish types, such as Primost, Bond Ost, and Kummin Ost are likewise manufactured on a small scale. Domestic cheese makers have learned how to make the "blue vein" types, similar to Roquefort and production has been definitely stimulated since imports have been cut off.

Cottage cheese, which is also known as pot cheese or baker's cheese, is an old standby. This cheese, generally not referred to as a "manufactured" product, is sold in greater quantity than any other variety except American. Cottage cheese is a favorite on the farm because it is one means of using up surplus skim milk. Furthermore, the only equipment needed to turn out a batch is a kettle and a hot stove.

Wisconsin Leads in Production

The "manufactured" cheeses are produced by factory processes, and when it comes to total output Wisconsin is away out in front. If you have ever traveled through the rural sections of the State you can easily see why Wisconsin turns out about half of the Nation's supply of over 700 million pounds. First you notice the dense cow population--mostly black and white cows--and then you see the cheese factories. There is a small one at almost every country crossroads.

The fame of New York State as a cheese-making area is not entirely attributable to the volume of output for there are several other States that almost approach it in terms of quantity produced. New York State's prestige among the cheese-making fraternity is largely due to its early development and leadership in the factory production of cheese in this country.

Early settlers in New York--primarily of Dutch extraction--brought with them a knowledge of cheese making that had been acquired in the Old Country. But cheese was usually made in the farm household in relatively small quantities and was not of uniform quality. Then Jessie Williams, up in Oneida County, started the factory system; and with that system skilled cheese makers were able to utilize in one establishment the milk of a number of farms. Cheese making grew into a science in which bacteria and molds were carefully controlled to produce the delicious and unique flavors that characterize cheese today.

The demand of New York's enormous metropolitan area for fluid milk and cream has gradually pushed cheese production into the background. Cheese output in New York State is more or less confined to the season of heavy milk production, when more milk is available than the city trade can use in fluid form.

Other States have been expanding their cheese production during the past few years, particularly Illinois, Indiana, and Ohio. With production also increasing significantly in some of the Southern States, Wisconsin's proportion of the United States total has been whittled down somewhat.

United States Production Increases

Total United States production of cheese has risen to nearly half again the output of a dozen or so years ago, and the value of production

in 1939 was close to a hundred million dollars. It is a sizeable industry, yet it is small in relation to the population, annual consumption of cheese in this country ranging between 5 and 6 pounds per person. But the latest available figures show that Switzerland consumes annually about 23 pounds per person. The Netherlands, France, and Denmark--in normal times--consume between 13 and 14 pounds. In Great Britain 9 pounds per person are eaten annually.

Great Britain, which must depend upon sea-borne traffic for her food supplies, has asked us to furnish her with cheese; and she has several good reasons for making this request. First, a study of nutritional values has proved that cheese is one of the best and cheapest sources of protein. Second, cheese does not require refrigeration in shipment and with refrigerator ships dwindling in numbers, it is important that space on those afloat be conserved. Furthermore, about 3 months are required to get dairy products from New Zealand to the British Isles, so that a considerable saving of time is possible by importing from the United States. Even before the Lease-Lend Bill became law, Britain had given cheese priority on shipping space to all foodstuffs except wheat.

Large Quantities Are Needed

Great Britain needs large quantities of cheese, make no mistake about that, and the Department of Agriculture has urged the industry to increase the production of American cheese by a third. The Department, to make this program effective, has agreed to support cheese prices. In order to encourage the use of milk for cheese, an attempt is being made to increase the price of cheese through the purchase program so that farmers delivering milk to cheese factories will receive more for their product than those delivering to creameries.

In areas where creameries and cheese factories are located in the same neighborhood, it may be relatively simple to shift the milk from one use to another. However, in States where dairy plants are far apart, it may be necessary for creameries to put in some cheese-making equipment if metals for vats can be obtained. Night shifts may be necessary if milk and trained cheese makers are available. Factories not producing other types of cheese may find it necessary to shift to the production of American cheese--the type desired by Britain. Various shifts of this kind, none of them simple, may be required.

There is one particularly bright spot in the picture. Farmers have been stoking their cows with plenty of feed this year and pastures have been good--except for a period earlier in the season over eastern areas. The output of milk, as a result, has held at high levels during the first half of 1941. Enough feed is on hand in all parts of the country to maintain this heavy flow of milk for the rest of the year. Bossie the Cow is willing and anxious to go all out for defense.

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JAPANESE BEETLES BEGIN 25TH YEAR OF INVASION

Japanese beetles have again made their appearance over large areas of the East for their annual invasion of lawns, golf courses, and backyard gardens, the New Jersey State Department of Agriculture reports. Twenty-five years ago ancestors of the present enemy were identified in New Jersey, and since that time they have pushed their colonies into adjoining States and have continued their attacks on an ever-increasing number of hosts.

Discovery of the Japanese beetle was made by H. B. Weiss, New Jersey State Department of Agriculture official, in September 1916. At a nursery in Cinnaminson he noticed attractive beetles which he believed to be of southern origin. Putting some in a bottle, Mr. Weiss sent them to the U. S. Department of Agriculture for identification. As soon as Federal officials recognized the identity of these unregistered aliens they began to worry, and allotted $5,000 the first year after discovery for investigation and study of the insect.

Mr. Weiss, now Chief of the Bureau of Plant Industry in the State Department of Agriculture, says that early attempts at control appear a little ridiculous in retrospect. For example, a quarter mile band around what was believed to be the beetle area was sprayed with arsenate of lead. But at that time the spray lacked ingredients to hold it to the foliage and often it was rained off before the belt was completed. Furthermore, no one realized the strength of the beetles in flying at high levels and for long distances when temperatures are favorable.

From surrounding villages, street sprinkler apparatus was rented and run over grassy roadsides and waste places, Mr. Weiss recollects. However, carbon disulphide emulsion was the only grub insecticide used, and it didn't prove particularly effective since the grubs flourished in many areas that were not possible to treat.

Today, more complete knowledge of Japanese beetle parasites and death-dealing sprays gives promise that this plant pest eventually will become of minor economic importance. The distribution of natural enemies of the Japanese beetle has continued through the spring months of this year. A large part of the infested area has now been colonized with a nematode parasite that attacks the beetle grub. Also, the U. S. Department of Agriculture has made introductions of the "milky disease" organism at each of the locations where nematodes have been introduced.

According to U. S. Department of Agriculture officials, experimentation will be conducted during this summer with another promising parasite of the adult Japanese beetle.

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The Oregon State Fair will be held September 1-7 at Salem, Oreg.

MARKETING CHIEF OUTLINES BASIS FOR GOVERNMENTAL SERVICE WORK

In a recent address at North Carolina State College, Mr. C. W. Kitchen, Chief of the Agricultural Marketing Service, outlined the fundamental background for governmental service work in the field of marketing. This work, Mr. Kitchen said, is a direct outgrowth of the changes that have taken place in agriculture the past 100 years.

Contrasting agriculture then and now, Mr. Kitchen said, "A century ago the farming industry tended to be a local enterprise to a greater extent than it is today. It was easy for the farmer to check on supply conditions, because transportation facilities were poor--except along the rivers--and a large part of the farmer's competition was confined to his own locality. Prices were more or less fixed by local supply and demand conditions, with the exception of such staple export crops as wheat and cotton, and quotations that could be translated in terms of the farmer's own produce were obtained by making a trip to the village on Saturday. In general, the marketing process was rather simple, because the producer dealt primarily with the consumer.

"Today," Kitchen went on, "production and marketing take place on a Nation-wide basis. Thus, it is virtually impossible for the farmer to keep in touch with supply conditions by his own initiative. Improved transportation and communication facilities have placed whole areas--many of them widely separated--in competition with each other. The farmer has the choice of, not one, but many markets; and he cannot keep completely in touch with the price situation by his efforts alone. The marketing system has likewise become more complex, with the farmer tending to have fewer direct dealings with consumers. Intermediate handlers or distributors have taken over that work.

"As the farmer began to see that the character of production and marketing was changing, that he could no longer go it alone, he began to ask for governmental assistance. Some of these requests form the background for the activities administered by the Agricultural Marketing Service today."

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CHICAGO EXCHANGE INCREASES MARGINS ON BUTTER AND EGGS

The Chicago Mercantile Exchange has notified the Department of Agriculture that margins on speculative transactions in butter futures will be raised from $400 to $600 per car, effective June 23, and from $300 to $360 on egg futures.

This step was taken on the recommendation of the special committee as part of a general program to curb undesirable speculation.

-PERTAINING TO MARKETING-

The following reports and publications, issued recently, may be obtained upon request from:

The Agricultural Marketing Service:

Marketing Services for Agriculture..By C.W. Kitchen (Address)

Labeling Processed Foods in the Terms of U. S. Grades . . . . . By Paul M. Williams (Address)

Institutional Purchasing of Processed Fruits and Vegetables.. By Paul M. Williams (Address)

The Spinning Quality of Texas Cotton . . . By Malcolm E. Campbell (Address)

Some Spinning Test Results of Interest to Cotton Manufacturers By Malcolm E. Campbell (Address)

The Utilization of Capacity and the Production and Distribution of Products by the Cottonseed Crushing Industry . . By G. S. Meloy (Address)

Marketing Eggs (Farmers' Bulletin No. 1378 revised) By Rob R. Slocum

Production of Manufactured Dairy Products, 1939

Production, Disposition, and Value of Citrus Fruits, Crop Seasons, 1919-20 to 1938-39...By Reginald Royston and Creighton N. Guellow

Illinois Corn, Estimated Planted Acreage, Yield, and Production, 1928-39 . . . By Clarence E. White and A. J. Surratt

Carlot Shipments of Fruits and Vegetables, 1940

The Bureau of Agricultural Chemistry and Engineering:

Trends in the Consumption of Fibers in the United States

The Bureau of Agricultural Economics:

Trends in Railroad Traffic, Freight Rates, and Prices, Perishable Agricultural Commodities . . . By Clifford C. Matlock